Miami-Dade County, Florida Water & Sewer Department 2001 Water Quality Report

Water – Our Most Precious Resource – Save It!

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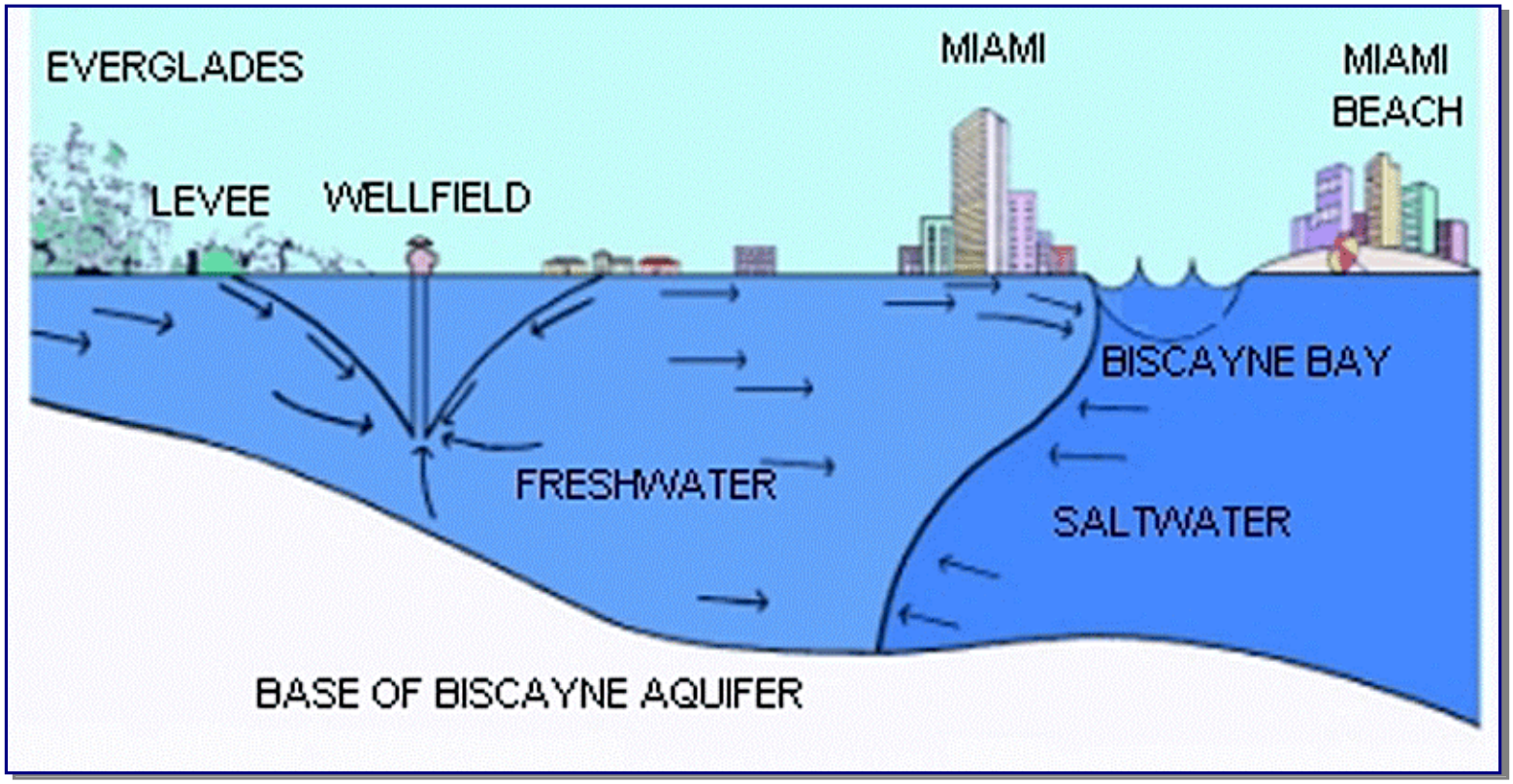
The Miami-Dade Water and Sewer Department (WASD) is pleased to present our Annual Water Quality Report. This report is designed to inform you about the water we deliver to you every day. Our primary goal is to provide you with a safe, dependable supply of drinking water. We want you to understand the constant efforts the Department makes to improve the water treatment process and protect our water resources.

Miami-Dade's Water Quality

This water quality report reflects the hard work and dedication of Department employees who ensure that water delivered from WASD's facilities meets all standards for safety, reliability and quality. The Department is proud to report that WASD has met all federal, state and local standards for drinking water during the year 2001.

This is a summary of the quality of the drinking water provided to you by WASD. We are committed to providing you this information about your water supply because customers that are well informed are our best supporters in any improvements necessary to maintain the highest drinking water standards. If you have any questions or concerns about the information provided, please feel free to call any of the numbers listed in What if I have any Questions.

Figure 1. Cross-section of Biscayne Aquifer.

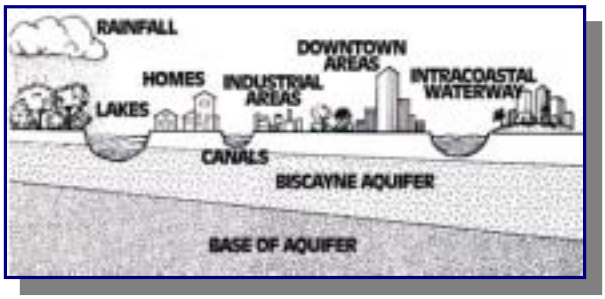


Where Does Miami-Dade Get Its Drinking Water?

The Biscayne Aquifer (see figure 1), an underground geologic formation, is the source of raw water for WASD. Approximately 330 million gallons per day (mgd) are withdrawn from the aquifer to meet the needs of the community. Water is pumped to WASD's water treatment facilities: Hialeah, John E. Preston, Alexander Orr and the South Dade Water Supply System.

The Hialeah and Preston Plants serve residents who live north of Flagler Street up to the Miami-Dade/Broward Line. The Alexander Orr Plant serves residents south of Flagler Street to S.W. 248 Street. These three regional water plants supply treated water to a common distribution system. The South Dade Water Supply System is comprised of five smaller water treatment plants that serve residents south of S.W. 248 Street in the unincorporated areas of the County. These five plants pump treated water into a common distribution system, which is separate from the main system. Highly trained microbiologists, chemists and water treatment specialists conduct or supervise more than 100,000 analyses of water samples each year. Water quality samples are collected throughout the county and tested regularly. Samples include untreated and treated water taken at our facilities, sample sites throughout the service areas and at customers' homes. These tests are overseen by various regulatory agencies on a federal, state and local level.

Customers judge the quality of their drinking water based on taste and appearance. The water delivered to residents in the northern part of the county originates from a region of the Biscayne Aquifer that contains natural organic material. These natural substances increase the color of the water. Although the water has a yellow tint, there is no harm associated with the color.



What Should I Know About Certain Contaminants?

Disinfection Byproducts

In May 1996, the Environmental Protection Agency (EPA) promulgated an Information Collection Rule (ICR) that required large water systems to test for disinfection byproducts (DBPs). DBPs are compounds that form when disinfectants used for microbial control react with naturally occurring organic compounds already present in the source water.

The table titled "Disinfection Byproducts Detected" lists the DBPs detected in drinking water produced by WASD. It also lists the disinfectants used to control microbial contaminants in drinking water. The Leisure City Water Treatment Plant was selected to represent the drinking water for the South Dade Water Supply System.

In December 1998, the EPA promulgated the Stage 1, Disinfectants and Disinfection Byproducts Rule (D/DBPR) which established an MCL of 60 parts per billion (ppb) for five Haloacetic Acids (HAAs) monitored under the ICR. The effective date for required compliance by groundwater systems such as ours is January 2004.

Because of the higher levels of natural organic compounds in the source water supplied to the Preston plant, additional treatment processes will be implemented to reduce these levels and meet the new standard by the effective date. As an added benefit, the new treatment process will reduce the yellow tint of the water in northern Miami-Dade County.

The most effective treatment process, enhanced softening followed by ozonation, underwent full-scale pilot testing. While this process is the most cost-effective alternative, it is estimated that the treatment modifications will cost the department and its customers $90 million. The (D/DBPR) also established a Maximum Disinfectant Residual Level (MDRL) of 4 parts per million (ppm) for the disinfectants chlorine and chloramines, currently used by the Department. The use of these disinfectants is required to ensure microbial protection of the drinking water in the distribution system.

Radon

Radon 222, or radon for short, is a colorless, odorless gas that occurs naturally in soil, air and water. Radon is formed from the radioactive decay products of natural uranium that is found in many soils. Most radon in indoor air comes from the soils below the foundation of the home, and in some locations can accumulate to dangerous levels in the absence of proper ventilation. In most homes, the health risk from radon in drinking water is very small compared to the health risk from radon in indoor air. For more information, call the EPA's Radon Hotline at 1-800-SOS-RADON.

In October 1999, the EPA proposed an MCL of 300 pCi/L or an alternative maximum contaminant level (AMCL) of 4000 pCi/L for radon. The AMCL requires development of a multimedia mitigation (MMM) program, which also addresses radon exposure from indoor air. Action on a final rule is expected in 2003.

Cryptosporidium

In April of 1993, the cryptosporidosis outbreak in Milwaukee, Wisconsin alerted water utilities to the potential threat that this protozoan organism presents to public water supplies. There were an estimated 400,000 cases of diarrhea and several deaths associated with the disease in severely immuno-compromised persons. This organism is primarily associated with surface water sources.

Although WASD uses the Biscayne Aquifer as a source of supply, the State has raised the issue that some groundwater sources may be under the direct influence of surface water (UDI) and therefore, are susceptible to the Cryptosporidium organism. As a result of the UDI issue and the sensitivity of the immuno-compromised, WASD first tested for Cryptosporidium in 1993 and has continued testing monthly since 1994. To date, neither Cryptosporidium nor Giardia—another protozoan—have been found in the source water supplying WASD's water treatment plants.

Nitrate

Although the level of nitrate (refer to the table on water quality data) is consistently below the health effect level, EPA requires the following information be included in this report: "Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue-baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider."

Lead

There is no lead in the water supplied by WASD. However, infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes because of your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may flush your tap for 30 seconds to two minutes before using tap water.

Customers With Special Health Concerns

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Additional Information

The sources of drinking water (both tap water and bottled water) include lakes, rivers, springs and wells. WASD's drinking water is drawn from the Biscayne Aquifer through wells extending an average of 80 feet below the ground surface. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791, or by visiting their web site at http://www.epa.gov/safewater.

What If I Have Questions?

Feel free to call us at any of the numbers listed below:

Public Affairs Section	(786) 552-8088
Alexander Orr Lab	(305) 275-3170
John E. Preston Lab	(305) 887-2007

Or visit our web site at http://www.miamidade.gov; click the link "Find a department," and click on "Water and Sewer Department."

For additional sources regarding water quality or health effects information in the local area, residents are encouraged to call the Department of Environmental Resources Management at (305) 372-6524 or the Florida Department of Health, Miami-Dade County Environmental Health Office at (305) 623-3500. Also, the Miami-Dade County Board of County Commissioners, charged with making decisions relating to the Department, meets regularly on Tuesdays and Thursdays at the Stephen P. Clark Center located in downtown Miami.

Groundwater Under the Direct Influence (GWUDI) of Surface Water

In 1998, the Miami-Dade Water and Sewer Department and the Florida Department of Environmental Protection entered into a five-year agreement as part of a statewide GWUDI evaluation program. The goal of the program is to identify wells that are at risk of being under the direct influence (UDI) of surface water.

WASD is proud to report that 86 of the 88 wells supplying water to our treatment facilities have been screened for UDI. The two wells that were not screened are being replaced because they did not meet newer well construction criteria. The remaining two wells will be completed and screened in 2002.

Of the 86 wells screened, only five have been identified as suspect. Four of these wells have already been rehabilitated and retested. All post-rehabilitation testing of these wells has produced results indicating they are no longer suspect UDI wells. The fifth well has been rehabilitated and is undergoing retesting.